AMENDMENTS TO THE CLAIMS

1. (currently amended) A method for replicating data from a storage device, comprising:

identifying one or more allocated storage locations on the storage device based. at least in part, on a file system associated with the storage device;

performing a read operation ~~on~~ comprising an I/O access with respect to each of the one or more ~~each~~ allocated storage locations ~~data block on the storage device~~;

recording each I/O access performed with respect to the storage device ~~resulting from the~~ in association with a read operation;

~~identifying the data blocks involved in each I/O access to determine which blocks contain valid data; and~~

generating, based on the recorded I/O access information, a list of data blocks on the storage device that contain valid data; and

replicating the data blocks that contain valid data.

2. (currently amended) The method according to claim 1, wherein ~~the~~ at least one read operation includes reading metadata associated with one or more files on the storage device.

3. (currently amended) The method according to claim 2, wherein the metadata includes one or more of the following: ~~the~~ a name of the file, access permissions to the file, ~~the~~ a date of creation of the file, ~~and~~ or dates of modification of the file.

4. (original) The method according to claim 1, further comprising cleaning a cache on a computer associated with the storage device before performing any read operations.

5. (currently amended) A method for replicating data from a storage device associated with a computer, comprising:

cleaning a cache on ~~the~~ a computer associated with the storage device;

identifying one or more allocated storage locations on the storage device based, at least in part, on a file system associated with the storage device;

causing the storage device to record each I/O access performed with respect to the storage device in association with a read operation;

performing a read operation comprising an I/O access with respect to each of the one or more ~~on each~~ allocated storage locations ~~data block on the storage device~~, including metadata associated with files on the storage device; ~~and~~

~~notifying an apparatus to record each I/O access to the storage device resulting from the read operation,~~

generating, based on the I/O access information recorded by the storage device, a list of data blocks on the storage device that contain valid data; and

~~wherein the data blocks involved in each I/O access are identified as having valid data and are replicated~~

replicating the data blocks that contain valid data.

6. (cancelled)

7. (cancelled)

8. (cancelled)

9. (cancelled)

10. (currently amended) A system to identify data blocks on a storage device that contain valid data ~~for replicating data~~, comprising:

a storage device configured to store data;

a first processor configured to: ~~software program that~~

identify one or more allocated storage locations on the storage device based, at least in part, on a file system associated with the storage device; and

perform[[s]] a read operation ~~on~~ comprising an I/O access with respect to each of the one or more allocated storage locations ~~data block on the storage device~~; and

a second processor configured to: ~~software program that~~

record[[s]] each I/O access performed with respect to the storage device ~~resulting from the~~ in association with a read operation[[,]];

wherein the first processor is further configured to:

generate a list of data blocks on the storage device that contain valid data based, at least in part, on the recorded I/O access information; and

replicate the data blocks that contain valid data ~~the data blocks involved in each I/O access are identified as having valid data and are replicated~~.

11. (currently amended) The system according to claim 10, wherein ~~the~~ at least one read operation includes reading metadata associated with one or more files on the storage device.

12. (currently amended) The system according to claim 11, wherein the metadata includes one or more of the following: ~~the~~ a name of the file, access permissions to the file, ~~the~~ a date of creation of the file, ~~and~~ or dates of modification of the file.

13. (original) The system according to claim 10, further comprising a computer associated with the storage device.

14. (currently amended) The system according to claim 13, wherein the first ~~software program~~ processor resides on the computer.

15. (currently amended) The system according to claim 13, wherein the first ~~software program~~ processor is further configured to:

clean[[s]] a cache on the computer before performing any I/O accesses ~~read operations~~.

16. (currently amended) The system according to claim 13, wherein the second processor is further configured to: ~~software program~~

manage[[s]] the storage ~~needs~~ operations of the computer.

17. (currently amended) The system according to claim 10, wherein the second processor comprises ~~software program is~~ a filter driver.

18. (currently amended) An apparatus to identify data blocks on a storage device that contain valid data ~~for replicating data from a storage device associated with a computer~~, comprising:

a storage device configured to store data;

a first processor configured to:

record I/O accesses performed with respect to the storage device in association with read operations; and

a second processor configured to:

identify one or more allocated storage locations on the storage device based on a file system associated with the storage device;

instruct the first processor to record I/O accesses performed with respect to the storage device in association with read operations; and

~~a software program for~~ performing a read operation ~~on~~ comprising an I/O access with respect to each of the one or more allocated storage locations ~~data block on the storage device and for notifying a second apparatus to record each I/O access to the storage device resulting from the read operation,~~

wherein the first processor is further configured to:

generate a list of data blocks on the storage device that contain valid data based, at least in part, on the I/O access information recorded by the first processor; and

replicate the data blocks that contain valid data ~~the data blocks involved in each I/O access are identified as having valid data and are replicated~~.

19. (currently amended) The apparatus according to claim 18, wherein the second processor is further configured to: ~~software program~~

clean[[s]] a cache on ~~the~~ a computer associated with the storage device before performing any I/O accesses ~~read operations~~.

20. (currently amended) The apparatus according to claim 18, wherein ~~the~~ at least one read operation includes reading metadata associated with one or more files on the storage device.

21. (currently amended) The apparatus according to claim 20, wherein the metadata includes one or more of the following: ~~the~~ a name of the file, access permissions to the file, ~~the~~ a date of creation of the file, ~~and~~ or dates of modification of the file.

22. (currently amended) The apparatus according to claim 18, wherein the second processor comprises a ~~apparatus is a second~~ software program.

23. (currently amended) The apparatus according to claim 18, wherein the second ~~apparatus is~~ processor comprises a filter driver.

24. (currently amended) The apparatus according to claim 18, wherein the second processor ~~apparatus~~ is part of a storage management system.

25. (new) The method of claim 1, wherein the file system is structured on a file-level.

26. (new) The method of claim 5, wherein at least one read operation includes reading metadata associated with one or more files on the storage device.

27. (new) The method according to claim 26, wherein the metadata includes one or more of the following: a name of the file, access permissions to the file, a date of creation of the file, or dates of modification of the file.

28. (new) The method according to claim 1, further comprising:

storing the list and the replicated data blocks in a memory.

29. (new) A method to identify data blocks on a storage device that contain valid data, comprising:

identifying one or more allocated storage locations on the storage device based on a file system associated with the storage device;

performing a read operation comprising an I/O access with respect to each of the one or more allocated storage locations;

recording each I/O access performed with respect to the storage device in association with a read operation; and

generating, based at least in part on the recorded I/O access information, a list of data blocks on the storage device that contain valid data.

30. (new) The method of claim 29, wherein the file system is associated with a virtual storage device used to manage storage of data on the storage device.

31. (new) The method of claim 29, further comprising:

storing the list in a memory.

32. (new) A system to identify data blocks on a storage device that contain valid data, comprising:

a storage device configured to store data;

a first processor configured to:

identify one or more allocated storage locations on the storage device based on a file system associated with the storage device; and

perform a read operation comprising an I/O access with respect to each of the one or more allocated storage locations; and

a second processor configured to:

record each I/O access performed with respect to the storage device in association with a read operation;

wherein the first processor is further configured to:

generate a list of data blocks on the storage device that contain valid data based at least in part on the recorded I/O access information.

33. (new) The system of claim 32, wherein the file system is associated with a virtual storage device used to manage storage of data on the storage device.

34. (new) The system of claim 32, wherein the first processor is further configured to:

store the list in a memory.